

# REQUEST FOR ACCESS OF ABANDONED APPLICATION UNDER 37 CFR 1.14

In re Application of \_\_\_\_\_

Application Number

Filed

08/233,777

May 10, 94

Group Art Unit

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1600

Paper No. \_\_\_\_\_

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Individual Patent



US006210939B1

(12) **United States Patent**  
**Gregory et al.**

(10) **Patent No.:** **US 6,210,939 B1**  
 (45) **Date of Patent:** **Apr. 3, 2001**

(54) **RECOMBINANT ADENOVIRAL VECTOR  
 AND METHODS OF USE**

(75) **Inventors:** Richard J. Gregory, Carlsbad; Ken N. Wills, Encinitas; Daniel C. Maneval, San Diego, all of CA (US)

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(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) **Appl. No.:** 08/328,673 \*

(22) **Filed:** Oct. 25, 1994

**Related U.S. Application Data**

\* (63) Continuation-in-part of application No. 08/233,777, filed on May 19, 1994, now abandoned, which is a continuation-in-part of application No. 08/142,009, filed on Oct. 25, 1993, now abandoned.

(51) **Int. Cl.** C12N 5/10; C12N 15/10; C12N 15/63; C12N 15/86

(52) **U.S. CL.** 435/172.3; 435/320.1; 435/363; 435/366; 435/370; 435/371; 435/252.3

(58) **Field of Search** 435/320.1, 172.3, 435/69.1, 172.1, 325, 363, 366, 370, 371, 252.3; 424/93.2, 93.6; 514/44; 935/32

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(57) **ABSTRACT**

This invention provides a recombinant adenovirus expression vector characterized by the partial or total deletion of the adenoviral protein IX DNA and having a gene encoding a foreign protein or a functional fragment or mutant thereof. Transformed host cells and a method of producing recombinant proteins and gene therapy also are included within the scope of this invention. Thus, for example, the adenoviral vector of this invention can contain a foreign gene for the expression of a protein effective in regulating the cell cycle, such as p53, Rb, or mitotin, or in inducing cell death, such as the conditional suicide gene thymidine kinase. (The latter must be used in conjunction with a thymidine kinase metabolite in order to be effective).

**25 Claims, 23 Drawing Sheets**